

BRONCHITIS

* Definition :- Bronchitis is inflammation or swelling of the bronchial tubes (bronchi), the air passages b/w the nose & the lungs.

→ More specifically, bronchitis is when the lining of the bronchial tubes becomes inflamed or infected.

→ Bronchitis is caused by viruses, bacteria, & other particles that irritate the bronchial tubes.

* Etiology & risk factor -

1. Smokers.
2. people who are exposed to a lot of second hand smoke.
3. people with weakened immune systems.
4. The elderly & infants.
5. people with gastroesophageal reflux disease (GERD).
6. People who are exposed to air pollution.

* Sign & Symptoms of bronchitis -

1. inflammation or swelling of the bronchi.
2. coughing.
3. production of clear, white, yellow, grey or green mucus (sputum).
4. shortness of breath.
5. wheezing.
6. Fatigue.
7. Fever & chills.
8. chest pain or discomfort.
9. Blocked or funny nose.

* Medical history -

1. Physical examination - persistent cough, fever.

2. Blood test - C-reactive protein, white blood cell count.

3. Sputum culture - presence of neutrophil granulocytes indicate streptococcus pneumoniae.

4. chest X-ray - if you have pneumonia & any other condition.

BRONCHIECTASIS

Definition - Bronchiectasis is a condition anatomically defined by chronic, irreversible dilation & distortion of the bronchi caused by inflammatory destruction of the muscular and elastic components of the bronchial walls.

* Bronchiectasis may be caused by a variety of condition -

1. airway obstruction.

2. Diffuse airway injury.

3. pulmonary infections (complication of long term pulmonary infection).

4. genetic disorder (cystic fibrosis).

5. abnormal host defense.

6. Idiopathic cause.

* Etiology -

1. postinfection -

2. bacterial pneumonia.

2. Tuberculosis

3. pertussis

4. Measles

5. Influenza

* Pathology -

i) dilation & distortion of the bronchi

ii) Damage of airway epithelium

iii) Dilation & hyperplasia of blood capillary

* clinical manifestations -

The ball ball mark of bronchiectasis is persistent or recurrent cough with production of large amounts of purulent sputum that may exceed 500ml/day

→ Many patterns with the disease have Hemoptysis

→ clubbing of the fingers also common because of respiratory insufficiency

→ Dyspnea

→ wheezing & pleuritic chest pain

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Assessment & diagnostic

1. history collection & physical examination

2. chest x-ray

3. HR CT (High-resolution computed tomography) is gold standard for diagnostic bronchiectasis, it will show either the presence or absence of bronchial dilation

* Investigations -

1. Bacteriological & mycological examination of the sputum

Radiological Examinations -

A) Plain chest x-ray

* 'ring shadows' or 'honey combing' due to cystic dilated bronchi.

* 'Tramline shadows' or 'x' band shadows'.

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